

Poster presentation

Admission diagnosis and timing of lumbar puncture in bacterial meningitis

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from Danish Society for Emergency Medicine: Research Symposium 2009
Copenhagen, Denmark. 26 April 2009

Published: 20 August 2009

Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine 2009, **17**(Suppl 2):P14 doi:10.1186/1757-7241-17-S2-P14

This abstract is available from: <http://www.sjtreem.com/content/17/S2/P14>

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Introduction

To evaluate the possible influence of admission diagnosis and clinical signs on delay in time to lumbar puncture in adult community acquired bacterial meningitis.

Methods

All adult cases of culture positive cerebrospinal fluids in East Denmark from 2002 to 2004 were included. Medical records were collected retrospectively with 98.4% case completeness. "Cardinal symptoms" were defined as: altered consciousness, fever, nuchal rigidity, subjective headache, convulsions prior to admission and petechiae.

Results

132 cases were included. Diagnosis at admission included meningitis (39%, n = 50), pneumonia/sepsis (9%, n = 12), acute cerebral vascular disease (10%, n = 13), febrilia (11%, n = 14), confusion/unconsciousness (15%, n = 19), other (16%, n = 21); with median time from admission to lumbar puncture 0.95 hr, 4.5 hr, 3.5 hr, 1.9 hr, 2.3 hr, and 4.15 hr ($p < 0.0001$ Kruskal-Wallis), respectively. When a minimum "3 out of 6 clinical cardinal symptoms" indicated meningitis, median time to lumbar puncture was shorter (1.0 hr vs 1.9 hr, $p < 0.001$).

Conclusion

Delay in time to lumbar puncture correlated to admission diagnosis and to initial clinical signs.